

Amendments to the Abstract:

Please replace the Abstract on page 2 of the specification as filed with the following replacement Abstract. The replacement Abstract will begin on page 40 of the specification.

ABSTRACT

The present teachings relate to methods of purifying, isolating, separating, and identifying target nucleic acids. In some embodiments of the present teachings, an affinity moiety can be incorporated into one of the flanking primers of a nucleic acid amplification reaction primer pair. ~~In some embodiments, the~~ The reaction mixture can be contacted with a binding moiety specific for the affinity moiety, thereby allowing immobilization of the double stranded amplification product, separation of reaction components lacking the affinity moiety, and isolation of the target nucleic acid strand. ~~In some embodiments, one~~ Further, one of the flanking primers of the nucleic acid amplification reaction can further comprise a label and a mobility modifier, ~~which are incorporated into the resulting amplified target nucleic acid strand,~~ thereby facilitating identification of the target nucleic acids. In some embodiments, the amplification reaction is multiplexed and comprises polymorphic microsatellites useful in human identification. ~~and further comprises polynucleotide regions of interest comprising polymorphic microsatellites. In some embodiments the methods can be applied to the areas of forensic science, human identification, paternity testing, agricultural science, and animal identification. Some embodiments can be applied to the~~ and the manufacturing of molecular size standards. Some embodiments of the present teachings provide for improved methods of performing electrokinetic injection.